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EXPERIENCES AND COPING STRATEGIES OF COLLEGE STUDENTS DURING
THE COVID-19 PANDEMIC

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Experiences and Coping Strategies of College Students During the COVID-19 Pandemic
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ABSTRACT

An emerging literature documents the many challenges faced by college students during the COVID-19 pandemic. Little is known, however, about how students responded to the adversity. Focusing on two large Canadian universities, we provide some of the first evidence on the coping strategies students reported and the relationships between their endorsement of specific coping strategies and their subsequent well-being. Students focused on compensating for a lack of structure by creating new routines, maintaining social connections, and trying new activities. Conditional on baseline problems indexes, students who initially endorsed social connectedness as a strategy score significantly higher on a comprehensive well-being index five to twelve weeks later.

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A appendices is available at <http://www.nber.org/data-appendix/w28803>

I. Introduction

The disruptive effects of the COVID-19 pandemic have been felt worldwide across many demographics, sectors, and institutions. College students, for example, have been affected by school closures, shifts to online learning, and the elimination of social and networking opportunities. Early studies suggest that the associated lack of routine and isolation have given rise to increasing mental health problems among an already vulnerable population (Anderson, 2020; Hamza, Ewing, Heath, and Goldstein 2020). Several recent studies convincingly document the wide-ranging effects of the pandemic on college students. Surveying students at Arizona State University, Aucejo, French, Araya, and Zafar (2020) show that the pandemic caused delays in degree progress, lost wages and employment opportunities, and diminished students' post-graduation labor market expectations. Low-income students were particularly affected, a finding echoed in Rodriguez-Planas (2020), who further demonstrates low-income students in the City University of New York system were more likely to experience stress and challenges with online learning. Surveying students across seven U.S. universities, Browning et al. (2021) find that many students felt a lack of motivation, anxiety, stress, and isolation.

Indeed, the emerging literature paints a bleak picture of college students' experiences during the COVID-19 pandemic. Yet, despite the rapid emergence of these important studies, we still know little about how college students *responded* to the adversity. That is, what coping strategies did they employ during the pandemic, and which strategies were effective at improving outcomes? Given the widespread negative effects of the pandemic on students, there is a clear need for evidence on best coping practices during the pandemic to help colleges better support their students. This paper aims to provide some of that evidence.

We proceeded in two parts. Study 1 was an open-ended survey of over 500 students at the University of Toronto (UofT) in Toronto, Canada. The survey was conducted approximately four weeks after the World Health Organization (WHO) declared a pandemic, at the end of participants' winter semester in 2020. Students were asked about the challenges they faced during the early stages of the pandemic and the strategies they used to overcome them, providing answers in open text boxes. We coded their responses to identify common challenges and coping strategies. Study 2, conducted during the 2020 summer semester at UofT and at York University in Toronto, used the results of that coding to inform the design of a set of Likert scale survey items that could quantify the degree to which students faced specific challenges and the degree to which they thought certain coping strategies would be most helpful. Administered approximately nine weeks after the WHO's pandemic declaration, 1,600 students completed this baseline survey. Between fourteen to twenty-one weeks after the pandemic declaration (depending on when summer courses concluded), students completed a follow up survey including Likert scale items measuring their well-being on dimensions such as satisfaction with life and university, social connections, mental and physical health, and specific concerns or disruptions caused by the pandemic.¹

In Study 1, coding of students' open-ended responses revealed that many struggled with establishing a new routine, felt lethargic or lacked motivation, and faced logistical problems with online learning. Students also felt lonely, depressed, and expressed financial concerns. Importantly for the present research, coding also revealed that many students used proactive and creative coping strategies, such as trying to establish a new daily routine in the absence of their usual structure, focusing on physical exercise, cooking and eating well. The most common coping

¹ Study 2 measures were included in a larger randomized controlled trial testing the effects of providing information about coping strategies to students. Half of students were provided with additional information about how previous students had coped (information condition) and half were not (no-information condition). There were no effects of the informational manipulation on any of the survey items reported in the present study.

strategy, used by many students, was trying to maintain social or group activity remotely or within their household.

In Study 2, commencing about five weeks later in May 2020, half of all students reported being worried about paying tuition, and, on average, students reported feeling nervous or anxious, having uncontrollable worry, and feeling depressed between eight to ten days in the last month. Many students also identified a lack of motivation, missing family and friends, and missing a predictable routine as concerns heading into the semester. These problems are not without consequence on student well-being: an index combining all reported problems significantly and negatively predicts many follow-up outcomes (recorded in late June or July 2020), including reductions in life satisfaction, feelings of control, a sense of belonging, mental and physical health, and greater stress.

Three coping strategies resonated with at least 45% of the students in Study 2: maintaining social connections, developing a satisfying routine, and trying new activities. While it is important to acknowledge that we cannot make causal claims because we do not have experimental or exogenous variation in coping strategy reporting or use across students, we do consider the potential effectiveness of various coping strategies by exploring the associations between reporting each strategy and follow-up outcomes. Here, we find a strong association between reporting maintaining social connections as a strategy and subsequent well-being: students who reported “maintaining social connections” as a coping strategy that resonated with them at the beginning of the semester reported better well-being five to twelve weeks later. Even when conditioning on baselines problems indices and many background variables, these students score 20 percent of a standard deviation higher on an aggregate well-being index consisting of measures of life satisfaction, feelings of belonging, social connection, control, mental and physical health, and

stress. None of the other coping strategies are associated with student well-being at the end of the semester.

This finding is consistent with well-established findings in the psychology literature that social connections are crucially important during stressful times. Social connections provide social support, which in turn is crucial for mental and physical well-being. Social support is defined as the perception or experience that one is valued and cared for by others, and that one is part of a social network that can be counted on to help each other when needed (Wills, 1991). Sources of social support can include romantic partners, family, friends, coworkers, connections to social, community, or religious groups. These sources can provide support that is informational (i.e., helping an individual determine resources and coping strategies), instrumental (i.e., providing tangible services such as financial support or transportation), and/or emotional (i.e., conveying that the individual is cared for and valued during a difficult time; see Taylor, 2011 for a comprehensive review).

Decades of research show the causal relationship between social support and mental and physical health outcomes. Classic research sought to document the relationship and understand the mechanisms through which it functioned. A classic review of the early literature found that social support fosters successful coping and adaptation (Cobb, 1976), crucial for well-being. The buffering hypothesis maintained that social support is a resource that enables people to deal with stress more effectively (Cohen & Wills, 1985), important because stress plays a significant role in poorer mental and physical health. Reviews that summarize the physiological mechanisms by which social support improves health and well-being find that it has benefits for the endocrine system, the cardiovascular system, and the immune system (see Uchino et al., 1996, for a review of 81 studies that support that conclusion). In contrast, a recent review of 40 other reviews found

that social isolation and loneliness are predictive of poorer well-being outcomes (Leigh-Hunt et al., 2017).

This paper contributes to a small but growing literature on student experiences during the COVID-19 pandemic. We add to the literature on the negative effects of pandemic-induced changes to higher education (Aucejo et al., 2020; Rodriguez-Planas, 2020; Browning et al., 2021) by documenting the challenges students at two large Canadian universities faced during the initial and medium-run stages of the pandemic. More importantly, we extend that literature by focusing specifically on the coping strategies students use (Study 1), and how the coping strategies that resonated with them predict well-being outcomes an average of five to twelve weeks later (Study 2). The findings about the importance of maintaining social connections, in particular, point to ways that college administrators and policymakers might support students' coping with the negative effects of the pandemic.

The remainder of this paper is organized as follows. The next section describes the open-ended survey that we administered in Study 1 approximately four weeks after the WHO declared COVID-19 a pandemic and presents the associated findings. Section III then describes the survey data gathered in Study 2 approximately nine (initial survey) and fourteen to twenty-one (follow-up survey) weeks after the WHO declared a pandemic and reports the associations between students' coping strategies and well-being outcomes. We offer concluding remarks in Section IV.

II. Study 1: Open-Ended Survey

In early April of 2020, approximately four weeks after the WHO declared COVID-19 a pandemic on March 11, 2020, we conducted an open-ended survey of 527 students at the University of

Toronto (UofT). These students were drawn from a sample of all first-year economics students from the fall semester of 2019 who had participated in a data-gathering project we administered as part of our broader research agenda in the *Student Achievement Lab*. Participants in the project had completed weekly online exercises throughout the fall semester, in which they either detailed their study habits and grade expectations or learned about common problems faced by college students and how to overcome them.² The data-gathering effort for this project concluded in December 2019. In April 2020, we emailed all students who participated in the fall intervention, inviting them to complete the short open-ended survey about their experiences with the COVID-19 pandemic. As an incentive, the first 100 students to complete the survey were offered either a \$20 e-transfer or Amazon.ca gift certificate. The full survey, consisting of eight open-ended questions, is available in Appendix A (Section A.1) and was designed to help us understand how the COVID-19 pandemic affected students and how they were coping.

Summary Statistics

We linked survey participants to their administrative university data and to the baseline survey data we gathered as part of the fall 2019 intervention. Columns 1 and 2 of Table 1 provide summary statistics for the open-ended survey sample in Study 1. Nearly 20 percent of students are first-generation college students, 40 percent live on campus, approximately half are Canadian, half are male, and the average student is 18.5 years old. The average incoming high school grade average

² Course instructors assigned students 2 percent of their overall grade for participating in these exercises during the fall semester. For more detail on these exercises, see Oreopoulos and Petronijevic (2019). For much more detail on the *Student Achievement Lab*, its protocols, and the past interventions, see <https://studentachievementlab.org/> and the following articles: Oreopoulos, Patterson, Petronijevic, and Pope (forthcoming); Oreopoulos, Petronijevic, Logel, and Beattie (2020); Dobronyi, Oreopoulos, and Petronijevic (2019); Oreopoulos and Petronijevic (2018), Beattie, Laliberte, and Oreopoulos (2018), and Beattie, Laliberte, Michaud-Leclerc, and Oreopoulos (2019).

of these students is quite high at 89 percent, consistent with UofT being one of the most selective institutions in Canada.

We coded students' responses to the eight questions in the survey in a systematic way. Two of the authors reviewed participants' responses to identify potential themes related to either the challenges students were facing or the coping strategies they were using. Given that participants had been provided with specific questions (e.g., "What have been the biggest changes to your routine since being asked to physically isolate?"), the themes were straightforward to identify. For example, related to challenges, we observed some students reporting they had previously been diagnosed with depression and/or anxiety, and that their new living situations and the uncertainty of the pandemic were exacerbating their symptoms. Additionally, some students were reporting anxiety about themselves or a family member contracting the virus. This observation was converted to the variable, "Experienced Depressive or Anxious Feelings" (0-mental health/outlook remained positive; 1-experienced depression or anxiety from transition to online learning, the pandemic, etc). Related to coping strategies, we observed some students reporting exercising specifically to deal with stress related to the pandemic. This observation became the coded variable "Physical Exercise" (0-no effort to incorporate physical exercise into new living situation; 1-actively tried to or incorporated regular exercise into new routine). The complete list of coded variables and definitions are provided in the codebook appearing in Section A.2 of Appendix A. After receiving one-on-one training, a graduate student research assistant classified the full set of open-ended survey responses by following this codebook.

Summary statistics for the problems and coping strategies students reported are listed in Table 2. We group problems in column 1 by whether they are related to student well-being or the logistics of online education. Considering well-being first, column 2 shows that 28.9 percent of students

felt depressed or anxious, 27.7 percent felt lonely, 28.3 percent experienced sleep disruptions, and 31.8 percent had financial concerns or worries. The largest negative reports were around feeling lazy and unmotivated (38.1 percent), and having difficulty concentrating (58.9 percent).³ Turning to education logistics, half of all students faced overall difficulty in adjusting to online learning, and 45 percent struggled to establish a new daily routine or had logistical issues with online learning. Only a quarter of students, however, reported grades suffering because of the switch to online learning, and an even smaller minority, approximately 9 percent, reported having problems with how their instructors handled the transition to the online learning. Most students reported being pleased with the effort instructors made.

We offer a further glimpse into student experiences by reporting quotes that indicate students felt depression or anxiety, loneliness, lethargy or lack of motivation, difficulty with online learning, and difficulty establishing a routine in Table B1 in Appendix B. These quotes capture students feeling depressed because of the loneliness that came from not seeing friends and anxious about the well-being of their families, their ability to succeed in their studies, and using the additional free time productively instead of squandering it away. Others reported trying to counteract feelings of loneliness by calling friends and family regularly or using social media to stay connected, even though these methods are imperfect substitutes for in-person interaction. Students had trouble with online learning for many reasons. Some did not have a quiet workspace at home because of neighbors or roommates, and others were in different time zones, making it challenging to follow with a synchronous course schedule. Although most students were quite

³ These figures imply the incidence of negative well-being is strikingly high. Looking ahead to Study 2, we corroborate this result by asking students directly (instead of coding from open-ended text) how many days in the last four weeks they experienced depression, anxiety, uncontrollable worry, or little pleasure in doing things. We found that approximately 30 percent of students reported feeling depressed or anxious at least 10 of the past 30 days, 38 percent reported feeling uncontrollable worry in at least 10 days, and 45 percent reported having had little interest or pleasure in doing things during at least 10 days.

pleased with the effort instructors made, some found it difficult to keep track of all the different ways each instructor shifted their course online. Further, the absence of structure in students' new, online learning environments contributed to a lack of motivation to complete schoolwork. The feeling that every day was the same as the last, along with a sudden abundance of free time, made it difficult to establish a new schedule.

But many students also responded to these negative experiences caused by the pandemic with creative coping strategies. Column 4 of Table 2 shows that nearly 40 percent of students reported trying to create a new daily routine while under lockdown and 55 percent reported turning to physical exercise to cope. Maintaining social or group activity remotely was by far the most common coping strategy, with 64 percent of students reporting it, and the proportion of students reporting social or group activity is statistically different (at the one-percent level) than the proportions of students reporting each of the other strategies listed in Table 2. Students also reported focusing on developing good sleeping habits, cooking or eating well, meditating, and focusing on developing a new hobby or learning new skills.

Table B2 in Appendix B shows randomly selected quotes indicating that students coped by forming a new routine, making social or group activities a priority, or turning to physical exercise. Students introduced structure into their lives in many ways, including introducing new practices like meditation, cooking, and exercise, going for regular walks, taking part in extracurricular activities remotely, and modifying their physical work environments to make it easier to be productive. With respect to social activities, many students reported a daily focus on exchanging text messages, speaking on the phone, and using software that facilitated face-to-face communication (e.g., FaceTime) with friends, while others who live at home reported enjoying the extra time with family. Some even came to see their bonds with friends and family strengthen

during the pandemic and reported having new perspective on how to maintain those relationships in the future. Many students also turned to different forms of physical exercise as a coping mechanism: some changed their exercise routines by using equipment they had at home in lieu of having access to a gym while others turned to daily walks or biking.

Overall, the open-ended survey reveals that students struggled with the unfamiliar, unstructured, and isolating circumstances of early pandemic lockdowns. But most students also expressed efforts to try to address the situation by finding productive coping strategies, such as establishing new routines, turning to others for companionship, and bettering themselves through exercise or new hobbies. We used the content from this open-ended survey to create materials on common problems faced and coping strategies used by students during the COVID-19 pandemic. In the following section, we describe the study in which we made these materials available to students, before exploring the associations between coping strategies and well-being outcomes.

III. Study 2: Likert Scale Survey

Building on the open-ended survey, we measured a series of variables that could be used to test longitudinal correlational hypotheses such as the ones in the present paper. These variables were collected as part of a field experiment during the summer semester of 2020 to test the efficacy of an intervention designed to help students cope with the common problems encountered during the COVID-19 pandemic. The intervention ultimately revealed null effects on the dependent variables of interest.

We ran the study under the standard protocol of the *Student Achievement Lab*, in which all students in summer first-year economics courses (starting in May 2020) at UofT and York

University (also in Toronto, Canada) received a small participation grade for completing a short online exercise at the beginning of the summer semester along with a follow-up survey at the end of the semester. All intervention materials are available in Section A.3 of Appendix A.

All students first completed the same baseline survey and were then randomly sorted to treatment and control groups. Treated students received materials that we designed after analyzing answers to the open-ended survey in Study 1 discussed above. We asked them to read five stories that were framed as testimonials from students who participated in a Student Experience Survey from April of 2020, a well-established approach in social psychology (Wilson and Linville, 1982). Each story conveyed common problems students had reported on the open-ended survey, as well as the coping strategies that were used to improve life circumstances during the pandemic. After reading the stories, students were then asked to identify their biggest concerns for the upcoming summer term and the coping strategies that most resonated with them from the stories.⁴ The treatment exercise concluded by having students write their own stories about coping during the pandemic to a first-year student in the fall semester of 2020.⁵ Students in the control group were asked to complete a modified version of the open-ended survey from April 2020, in which we removed questions about coping strategies and personal growth to avoid any potential treatment effect, leaving questions about challenges during the pandemic, experiences with online learning, and plans for enrollment in the fall semester of 2020. Both groups completed the same follow-up survey later in the semester, in which we collected rich data on mental health and well-being.

⁴ Students selected both concerns and strategies from a prepopulated list that included the option to expand with an open-ended response.

⁵ We additionally invited treated students to participate in a text message coaching program, in which we sent weekly messages about study tips, mental health tips, and check-in messages soliciting a response.

As noted, in both the full sample and pre-registered subgroups, our experimental evaluation revealed no impact of treatment on course grades and a variety of well-being outcomes collected during the follow-up survey at the end of the summer semester. We do not report the (null) treatment effect estimates in this paper;⁶ instead, we focus on documenting variables that further describe the problems students experienced during the COVID-19 pandemic and on identifying which coping strategies appear most effective at improving well-being outcomes.

Baseline Summary Statistics

Columns 3 to 6 of Table 1 provide summary statistics for the Study 2 sample, reported separately for UofT (columns 3 and 4) and York University (columns 5 and 6). At UofT, 872 students completed the initial survey and 585 completed the follow-up survey; at York University, 737 completed the initial survey and 657 completed the follow-up survey. Students completed the initial baseline survey and intervention materials in early May, approximately nine weeks after the WHO declared COVID-19 and pandemic. In terms of academic preparedness, students in Study 2 at UofT are negatively selected compared to students in Study 1 because we conducted Study 2 in the summer semester when students are more likely to be repeating previously failed or dropped courses. Compared to students from Study 1, UofT students in Study 2 are more likely to be first-generation and male, are older, have lower incoming high school grade averages, and are less likely to be Canadian citizens. Compared to UofT students in Study 2, students from York University are even more likely to be first-generation students (13 percentage points), are approximately two years older, have much lower incoming high school grades, and are much less likely to expect to earn an A average across their summer courses.

⁶ Results are available upon request.

Table 3 documents the problems and coping strategies students reported. Focusing first on the problems reported during the baseline survey taken by all students, column 2 shows that a third of all students worried about whether they would run out of food before having money to buy more while half of students worried about being able to pay their university tuition. The next five variables are measured on a 1 to 7 scale capturing the degree of agreement with a given statement and coded such that *higher values represent worse outcomes* (e.g., stronger agreement with the statement “The pandemic has made life challenging” or lower confidence in ability to cope with stress). We also recorded the number of days in the last four weeks students have experienced nervousness, worrying, little interest in doing things, or depression. On average, students experienced these feelings between 8 to 10 days in the last four weeks.

We construct a summary problems index using all the variables reported in column 1 of Table 3 following the method in Oreopoulos et al. (2020) – that is, we first standardized each variable to have mean zero and standard deviation one and we then take the average of the standardized variables as the value of the problems index for each student. Reported in the last row of column 2, the problems index has mean zero (mechanically) and a standard deviation of 0.59. In subsequent analyses, we use the problems index as a summary measure of the difficulty students face at baseline.

Columns 4 and 6 of Table 3 restrict the sample to treated students, because those students answered questions that are key to the hypotheses tested in Study 2, and show the fraction of students who reported being concerned about each problem listed in column 3 or reporting whether each coping strategy in column 5 resonated with them after reading the stories.⁷ Nearly two-thirds

⁷ To be clear, both problems and coping strategies were selected immediately after reading the stories and were part of the initial (i.e., at baseline) exercise for treated students.

of students were worried about lacking the motivation to complete schoolwork during the summer semester, while half missed a predictable routine and their family and friends. Approximately 44 percent of students reported being anxious about how long public health restrictions related to the pandemic would last. We also construct a treatment problems index (reported as the last entry in columns 3 and 4), again reflecting a measure of the difficulty that students faced at baseline, by taking a simple average of the original four variables indicating each concern.

Given that students completed the baseline survey and treatment exercise at the beginning of the semester, we did not ask about which strategies they were already using. We instead discussed coping strategies throughout the stories in a way that reflected the experiences of students in the Study 1 survey and then asked treated students in Study 2 to tell us which of these strategies resonated most with them. As noted, many students in Study 1 reported trying to maintain a feeling of social belonging, creating a new routine, trying new activities (e.g., physical exercise, cooking, reading) or hobbies, and helping others. They were also highly satisfied with how instructors handled the online transition and suggested getting help from instructors. Our stories, available in full in Appendix A.3, reflected these themes. Story 2, for example, explicitly discusses establishing a new routine as a strategy, while Story 5 additionally outlines the effectiveness of discovering new activities and hobbies. Story 3 discusses physical exercise, maintaining social connections, and helping others as coping strategies. In Story 4, we convey that most professors have been helpful during the pandemic, and again emphasize the benefits of establishing a new routine.

In column 5 of Table 3, we group the coping strategies students could have selected as resonating most with them after reading the stories into three broad categories: “Social Belonging,” “New Routine or Structure,” and “Additional Strategies.” Column 6 reports the fraction of treated

students who selected each of the coping strategies in column 5 as resonating most with them after reading the stories. Creating a new routine resonated with the most students, with 65 percent of students selecting it. Approximately half of all treated students reported trying new activities and hobbies as a strategy that resonated and 46 percent selected socially connecting with others. A quarter of students identified with helping others as a strategy, 33 percent reported getting help from instructors as resonating with them, and 41 percent reported trying to learn from setbacks.

Having described our data on problems students faced in the beginning of the summer semester and the coping strategies that most resonated with them, we now explore the relationships between these coping strategies and well-being outcomes measured at the conclusion of the summer semester.

The Associations Between Coping Strategies and End-of-Semester Outcomes

Our measures of well-being outcomes come from the follow-up survey students completed at the end of their summer first-year economics course. We restrict the sample to treated students in this section because only they were asked to read about, and respond to questions about, coping strategies at the start of the summer semester. For students attending York University and the main (downtown Toronto) campus of UofT, St. George, the follow-up survey was taken in early to mid-June, about fourteen weeks after COVID-19 was declared a pandemic. Students attending UofT's two suburban satellite campuses, UofT Mississauga or UofT Scarborough, completed their courses in August and took the follow-up survey in late July or early August, approximately 21 weeks after the pandemic was declared.⁸

⁸ To account for this and other across-campus differences, all regressions in this section include campus fixed effects.

Table B3 in Appendix B documents the twenty-six questions we use to construct a summary index of student well-being, categorized into eight broad categories for ease of presentation. As one might expect given the conceptual similarity across the full twenty-six items, Cronbach's alpha, a measure of internal consistency reliability, across the items is very high, estimated at 0.9. To provide a concise set of estimates and avoid issues around multiple hypothesis testing, we therefore grouped all twenty-six items into a single well-being index. Following our approach in Oreopoulos et al. (2020), we first coded each variable such that *higher values correspond to better outcomes* (e.g., higher values of the stress variables correspond to students feeling *less* stress) and then standardized each of the variables to have mean zero and standard deviation one. For each student, we then took the mean of all twenty-six standardized variables to construct the overall well-being index. The well-being index in the full sample of treated students has a mean of zero (mechanically) and a standard deviation of 0.548.

Table 4 shows our main results from Study 2. Here we regress the overall well-being index on six binary variables, each indicating whether a student selected a particular coping strategy as resonating with them after reading the stories during the baseline exercise. For completeness, we first show raw correlations in Column 1 (without any additional control variables), but note that these estimates reflect in part the degree to which coping strategies are predicted by baseline levels of problems, given the correlation between baseline problems and coping strategies and the correlation between baseline problems and follow-up well-being outcomes.⁹ Our preferred estimates in columns 2 and 3 correct for these associations by controlling for both baseline problem

⁹ For example, the correlation between selecting instructor helping as a strategy and the overall well-being index is -.10. But the correlations between selecting this strategy and the baseline problems and the treatment problems index are 0.15 and 0.2, respectively. All coping strategies are generally positively correlated with the baseline problems indexes, suggesting that students with greater problems at baseline are more likely to report various strategies as resonating. These correlations are available upon request.

indexes in the analysis, thereby more appropriately addressing our research question about the degree to which endorsing certain coping strategies after reading about their effectiveness predicts improvements in well-being across the semester.

The estimates in column 2 of Table 4 show, unsurprisingly, that each problem index significantly and negatively predicts the follow-up well-being index: one standard deviation increases in the baseline survey problems index and in the index specific to treated students are associated with 0.44 and 0.21 standard deviation decreases in the well-being index, respectively. Conditional on these indexes, however, students who reported socially connecting with others as a strategy that resonated with them score 22 percent of a standard deviation higher on the well-being index than students who did not report resonating with this strategy. Although this result is robust to accounting for many other unique control variables in column 3, remaining statistically significant at the 1 percent level, we highlight again that one cannot interpret this estimate causally, as we do not have exogenous variation in coping strategy reporting.¹⁰ Indeed, we posit that this result is suggestive and consistent with prior work on the importance of social connections, but that further research should be done to assess the effectiveness of this strategy on student well-being during the COVID-19 pandemic. None of the other strategies are significantly associated with the well-being index.

Table 5 explores the associations between coping strategies and the well-being index in four subgroups of interest while conditioning on the full set of control variables. Reporting social connections as resonating appears to be particularly important for women, as women who reported resonating with this strategy scored 34 percent of a standard deviation higher on the well-being

¹⁰ Additional control variables include first-generation status, age, gender, race, citizenship, prior university grades, baseline self-reported goals in university, a measure of locus of control at baseline, and expected summer semester grades at baseline.

index than women who did not. In contrast, there is no difference in the well-being index among men who reported social connections as a coping strategy that resonated and men who did not, and the differential significance of reporting this coping strategy across men and women is significant at the 5 percent level. While the point estimates are not statistically different from each other across the remaining subgroups, the pattern of results shows that endorsing socially connecting with others is equally important among Canadian and international students (columns 3 and 4), more important for first-generation than non-first-generation students (columns 5 and 6), and equally important for students with higher versus lower values of the baseline survey problems index (columns 7 and 8).

In Table 6, we show that the main results are remarkably consistent across different contexts that vary in student populations and location characteristics (e.g., urban vs suburban) by excluding one campus at a time from the regression analysis in columns 1 to 4 and obtaining very similar results. Dropping York University or each of UofT's three campuses (the main campus, St. George, or the two satellite campuses, Mississauga and Scarborough) has little effect on main results: students who selected socially connecting with others as a coping strategy that resonated score higher on the well-being index at follow-up, and the point estimate is not statistically different across any of the columns. These analyses are an additional indicator of the robustness of this association, in that it is not constrained to one particular social context. As before, none of the other coping strategies significantly predict the well-being index.

In columns 5 and 6 of Table 6, we assess the sensitivity of the results to the timing of the follow-up survey. Students at York and UofT's main campus, St. George, took the follow-up survey in June of 2020 because their economics course concluded in that month. Students at UofT's two satellite campuses, Mississauga and Scarborough, took the survey in August of 2020—

when their courses came to an end. Although the point estimate on socially connecting with others is larger in the sample who completed the follow-up survey in August (column 6), it is estimated imprecisely owing to the smaller sample size and is not statistically different from the point estimate in column 5, where the sample is restricted to those who completed the follow-up survey in June.

In summary, the results suggest that students who reported maintaining social connections as a coping strategy that resonated with them score approximately 20 percent of a standard deviation higher on an index measuring overall well-being at the conclusion of their summer economics course, controlling for problems reported at baseline, meaning that resonating with social connection as a coping strategy predicted an improvement in well-being over the course of a semester. This result appears to be stronger among women than among men, is robust across the different campuses in our sample, and does not appear to be driven by the time elapsed between the initial and follow-up survey.

IV. Conclusion

The present research sheds light on the coping strategies college students use to deal with the stress and novel problems created by the pandemic and the need for social distancing (Study 1). Given findings that students face significant challenges during the pandemic, from mental health problems, financial strain, isolation, and challenges adapting to online learning (Anderson, 2020; Hamza et al. 2020; Rodriguez-Planas, 2020; Browning et al., 2021), understanding the coping strategies students use could help elucidate their experience and point to ways that colleges can support their success and well-being. Additionally, while we do not have experimental variation, this research shows that out of a comprehensive list of coping strategies used by students, only endorsement of social connection predicted important well-being outcomes at the end of the

semester, controlling for initial levels (Study 2). This finding highlights the importance of focusing on social connection and social support during times of stress and suggests that colleges may support students' well-being by providing opportunities for them to connect with each other and make time to connect with people who are not associated with the college (e.g., family; old friends).

The key finding, that endorsing social connection as a coping strategy predicts well-being weeks later, is consistent with existing research in social psychology. Social connection is essential for social support, and social support plays an important role in well-being. Social connections with individuals and/or groups predict better well-being over time (see Taylor, 2011, for a review), and interventions that improve social support cause improved well-being on a variety of outcomes (Hogana, Lindena, and Najarian, 2002).

Subgroup analyses showed that the finding that resonating with social connection predicts better well-being over time was driven by women. We suggest caution in interpreting these results, as random variation could play a role. However, one of the few consistent and relatively stable psychological differences between women and men is that women tend to be more interdependent than men, (e.g., Maccoby 2002) and more likely than men to turn to others for support in stressful situations (e.g., Taylor, 2002), perhaps explaining why women who do not resonate with social connection as a coping strategy could be particularly likely to have lower well-being over time.

A limitation of the present research is that, in Study 2, students did not specifically report their intent to seek social connection as a coping strategy, nor did the study include observations of the extent to which they objectively used social connection as a coping strategy. Instead, students reported which coping strategies resonated with them after reading about how other students successfully used social connection and other coping strategies. It is plausible, however, that

students at least *attempt* to use the coping strategies that resonate with them (and, conversely, do not attempt to use coping strategies that did not resonate with them). That is, students' reports of whether a coping strategy resonated with them is likely to be a fair predictor of whether they later attempted to use that coping strategy.¹¹

However, even if students did interpret the question “which of these coping strategies resonate with you?” as unrelated to their plans to use those coping strategies, the findings in this paper remain consistent with past research about social connection and well-being. Research in social psychology finds that perceptions of social support can matter as much as objective measures of social support in predicting important outcomes. Outside raters' quantifications of social support, such as counts of the number of social contacts one has in a particular time period, or counts of the number of friends a person has, do indeed predict well-being outcomes. But a large body of research shows that peoples' perceptions of their social support, (e.g., the perception that they have people in their lives who value them, and perceptions that those people will be there when needed) also predict important outcomes. For example, students with low self-esteem, who research consistently finds tend to underestimate the degree to which they are valued in their close relationships (i.e., tend to perceive weaker social connections), have poorer physical health over time, even controlling for baseline health (Stinson et al., 2008). As such, even if resonating with social connection as a coping strategy does not predict actually using it, past research suggests that just knowing it is coping option that is there if needed could predict better well-being weeks later.

Past research also finds that social interactions do not have to be in-person to be experienced as true social connection. Connecting through social media, although known to have

¹¹ Indeed, the use of coping strategies among students is evident from Study 1, where students reported using many coping strategies, with maintaining social connection being the most popular.

drawbacks, has also been found to help people connect with friends, stay in touch with extended family, and find support in stressful times (Pew, 2009; Pinker, 2014; Rainie et al, 2011). It can also deepen existing relationships—people are less self-conscious when communicating electronically, and therefore share more of their joys, worries, and stresses. Such self-disclosure is associated with positive relationship outcomes (Valkenburg & Peter, 2009). This suggests that finding ways to connect, such as by text or virtual meeting platforms, can provide much-needed social support to foster students' well-being during difficult times.

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Table 1: Student Summary Statistics

	Study 1 Sample		Study 2 Sample			
	UofT		UofT		York	
	(1) Mean/SD	(2) Sample Size	(3) Mean/SD	(4) Sample Size	(5) Mean/SD	(6) Sample Size
Prior Grade*	72.666 [11.825]	483	70.457 [10.692]	836	67.393 [15.268]	647
Final Grade*	77.394 [9.975]	481	73.036 [11.457]	861	73.538 [14.704]	778
First Generation	0.176 [0.381]	516	0.301 [0.459]	873	0.456 [0.498]	737
Age	18.424 [1.315]	502	19.919 [2.026]	933	21.528 [4.106]	779
Male	0.464 [0.499]	502	0.542 [0.498]	933	0.534 [0.499]	779
Canadian	0.554 [0.498]	502	0.379 [0.486]	933	0.445 [0.497]	779
Incoming High School Grade	89.010 [5.755]	411	87.598 [5.803]	758	80.581 [7.285]	314
Lives on Campus	0.413 [0.493]	508	- -	-	- -	-
High Effort Approach to College	0.717 [0.451]	516	0.601 [0.490]	873	0.643 [0.479]	737
Expected Grade Average+	79.994 [7.295]	513	0.584 [0.493]	873	0.509 [0.500]	737
Locus of Control (4-Point Scale)	- -	-	2.591 [0.687]	873	2.614 [0.692]	737
Race						
White/Caucasian	- -	-	0.072 [0.259]	873	0.085 [0.279]	802
East Asian	- -	-	0.600 [0.490]	873	0.347 [0.476]	802
South Asian	- -	-	0.134 [0.341]	873	0.226 [0.418]	802
Other	- -	-	0.194 [0.395]	873	0.343 [0.475]	802
Weeks Since Pandemic Declared						
Initial Survey Taken	4.38 [0.085]	527	8.829 [0.901]	872	9.426 [0.542]	737
Follow-Up Survey Taken	- -	-	17.296 [4.144]	585	13.896 [0.836]	657

Notes: *In the Study 1 sample, the prior grade is students' average grade across all 2019 fall semester courses and the final grade is their average grade across all 2020 winter semester courses. In the Study 2 sample, the prior grade is students' average grade across all 2019-2020 fall and winter semester courses and the final grade is their average grade across all 2020 summer semester courses. +In Study 1, the expected grade average is the overall average grade students' reported expecting to earn throughout the 2019-20 academic year. In Study 2, the expected grade average is an indicator variable equal to one for students who expect to earn an A average or more during the 2020 summer semester and zero otherwise. The top entry in Columns (1), (3), and (5) is the mean of each variable and the bottom entry reports the standard deviation in brackets. Columns (2), (4), and (6) report the number of observations over which summary statistics are calculated for each variable.

Table 2: Problems and Coping Strategies Summary Statistics - Study 1

(1) Problem	(2) Mean	(3) Coping Strategy	(4) Mean
<u>Well Being</u>			
Difficulty Concentrating	0.589	Social or Group Activity	0.637
Lethargy or Lack of Motivation	0.381	Physical Exercise	0.545
Financial Concern/Worries	0.318	Created New Routine	0.391
Depression or Anxiety	0.289	Cooking or Eating Well	0.280
Sleep Patterns Affected	0.283	Focusing on Getting Sleep	0.175
Loneliness	0.277	New Hobbies or Learning New Skills	0.168
		Reading	0.163
		Meditation	0.120
<u>Education Logistics</u>			
Adjustment to Online Learning Difficult Overall	0.526		
Struggling to Establish New Routine	0.454		
Logistical Problems with Online Learning	0.446		
Grades Suffering due to Online Learning	0.262		
Problems with Instructors	0.087		

Notes : Column (2) reports the fraction of students who report experiencing each problem listed in Column (1). Column (4) reports the fraction of students who report trying each coping strategy listed in Column (3).

Table 3: Problems and Coping Strategies Summary Statistics - Study 2

Full Sample		Treated Sample			
(1)	(2)	(3)	(4)	(5)	(6)
Baseline Survey Problems	Mean/SD	Problems Listed During Treatment	Mean/SD	Coping Strategies Listed Post Treatment	Mean/SD
Worried about Purchasing Food	0.340 [0.474]	Lack of Motivation	0.658 [0.475]	<u>Social Belonging</u> Socially Connect with Others	0.463 [0.499]
Worried about Paying Tuition	0.520 [0.500]	Missing Family and Friends	0.461 [0.499]	Get Help from Instructors	0.339 [0.473]
Personal Situation Under Pandemic Better than Most (1-7)	3.397 [1.542]	Missing a Predictable Routine	0.509 [0.500]	<u>New Routine or Structure</u> Develop More Satisfying Routine	0.659 [0.474]
The Pandemic has Made Life Challenging (1-7)	4.703 [1.707]	Anxious about the Lockdown	0.438 [0.496]	Try New Activities or Hobbies	0.533 [0.499]
Am Able to Stay Socially Connected During Pandemic (1-7)	3.554 [1.794]	Treatment Problems Index	0.517 [0.319]		
Amount of Stress in the Last 4 Weeks (1-7)	4.060 [1.547]			<u>Additional Strategies</u> Make Effort to Learn from Setbacks	0.413 [0.493]
Confidence in Ability to Cope with Stress (1-7)	4.095 [1.408]			Help Others	0.253 [0.435]
Number of Days in Last 4 Weeks You have Felt...					
Nervous, Anxious, or on Edge	9.699 [7.636]				
Unable to Stop or Control Worrying	8.798 [7.952]				
Little Interest or Pleasure in doing Things	10.267 [8.190]				
Down, Depressed, or Hopeless	7.981 [7.897]				
Problems Index (Average of Standardized Variables Above)	0.000 [0.590]				
Observations	1,610		892		892

Notes: Column (2) reports the fraction of students who report experiencing each problem listed in Column (1) along with the standard deviation in brackets. Column (4) reports the fraction of treated students who report being concerned about each problem listed in Column (3) along with the standard deviation in brackets. Column (6) reports the fraction of treated students who report each coping strategy listed in Column (5) as resonating with them along with the standard deviation in brackets.

Table 4: Associations Between End-of-Semester Outcome Index and Coping Strategies - Study 2

	(1)	(2)	(3)
Socially Connect with Others	0.075 [0.047]	0.115 [0.040]***	0.124 [0.043]***
Get Help from Instructors	-0.098 [0.050]*	-0.034 [0.043]	-0.014 [0.043]
Created New Routine	0.014 [0.048]	0.017 [0.041]	0.009 [0.046]
Try New Activities	0.078 [0.047]	0.066 [0.042]	0.024 [0.045]
Make Effort to Learn from Setbacks	-0.059 [0.046]	-0.010 [0.042]	0.025 [0.045]
Help Others	-0.069 [0.051]	0.013 [0.045]	0.006 [0.046]
Baseline Survey Problems Index	-	-0.410 [0.037]***	-0.405 [0.041]***
Treatment Problems Index	-	-0.335 [0.085]***	-0.249 [0.099]**
Additional Control Variables?	N	N	Y
Observations	616	551	470
Dep Var. Mean	0	0	0
Dep Var. SD	[0.548]	[0.548]	[0.548]

Notes: Column 1 reports the estimated coefficients from regressions of the outcome index from the follow-up survey on the coping strategies treated students listed as resonating with them and campus fixed effects. In addition to campus fixed effects, column 2 also controls for the baseline survey problems index and the post-treatment problems index. Column 3 additionally accounts for the following control variables: an indicator for first-generation student; age; an indicator for being male; an indicator for being a Canadian citizen; mean prior grade; an indicator for taking a maximum effort approach to university studies; a measure of baseline locus of control; expected grade average at the start of the 2020 summer semester, and student race indicators. Robust standard errors are reported in brackets below coefficient estimates. *** indicates statistical significance at the 1 percent level; ** indicates statistical significance at the 5 percent level; * indicates statistical significance at the 10 percent level.

Table 5: Associations Between End-of-Semester Outcome Index and Coping Strategies Across Subgroups - Study 2

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	<u>Gender</u>		<u>Nationality</u>		<u>First Generation Status</u>		<u>Baseline Problems Index Value</u>	
	Men	Women	Canadian	International	First Generation	Not First Generation	Above Median	Below Median
Socially Connect with Others	0.037 [0.056]	0.191 [0.068]***	0.112 [0.067]*	0.130 [0.062]**	0.149 [0.073]**	0.068 [0.055]	0.119 [0.060]**	0.109 [0.065]*
Get Help from Instructors	-0.031 [0.060]	0.003 [0.063]	0.004 [0.062]	-0.029 [0.065]	0.014 [0.086]	0.004 [0.053]	0.026 [0.062]	-0.002 [0.065]
Created New Routine	-0.037 [0.061]	0.033 [0.070]	0.002 [0.068]	0.021 [0.067]	-0.011 [0.069]	-0.031 [0.065]	-0.011 [0.073]	-0.026 [0.069]
Try New Activities	0.030 [0.062]	-0.009 [0.069]	0.002 [0.070]	0.060 [0.064]	-0.011 [0.081]	0.031 [0.058]	0.048 [0.068]	-0.024 [0.067]
Make Effort to Learn from Setbacks	0.049 [0.061]	-0.000 [0.066]	-0.012 [0.068]	0.062 [0.066]	0.021 [0.079]	0.049 [0.055]	-0.030 [0.065]	0.093 [0.065]
Help Others	-0.029 [0.065]	0.010 [0.069]	-0.006 [0.068]	0.020 [0.069]	-0.111 [0.077]	0.046 [0.058]	0.064 [0.059]	-0.081 [0.075]
Baseline Survey Problems Index	-0.316 [0.056]***	-0.514 [0.058]***	-0.485 [0.059]***	-0.348 [0.060]***	-0.520 [0.072]***	-0.347 [0.052]***	-0.440 [0.082]***	-0.451 [0.112]***
Treatment Problems Index	-0.270 [0.128]**	-0.192 [0.144]	-0.103 [0.130]	-0.402 [0.165]**	-0.130 [0.149]	-0.336 [0.123]***	-0.220 [0.142]	-0.276 [0.143]*
Observations	244	226	226	244	170	300	232	238
Dep Var. Mean	0.043	-0.046	-0.059	0.055	-0.011	0.025	-0.219	0.229
Dep Var. SD	[0.531]	[0.566]	[0.537]	[0.553]	[0.530]	[0.536]	[0.490]	[0.480]

Notes: Each column reports the estimated coefficients from regressions of the outcome index from the follow-up survey on the coping strategies treated students listed as resonating with them in a subsample of students defined by the column title. All regressions control for the the baseline survey problems index and the treatment problems index and additionally account for the following control variables: an indicator for first-generation student; age; an indicator for being male; an indicator for being a Canadian citizen; mean prior grade; campus fixed effects; an indicator for taking a maximum effort approach to university studies; a measure of baseline locus of control; expected grade average at the start of the 2020 summer semester, and student race indicators. Robust standard errors are reported in brackets below coefficient estimates. *** indicates statistical significance at the 1 percent level; ** indicates statistical significance at the 5 percent level; * indicates statistical significance at the 10 percent level.

Table 6: Associations Between End-of-Semester Outcome Index and Coping Strategies Across Campuses - Study 2

	(1)	(2)	(3)	(4)	(5)	(6)
Excluded Campus:	York	St. George	Mississauga	Scarborough	Miss & Scar	York & St. George
Socially Connect with Others	0.151 [0.062]**	0.120 [0.052]**	0.092 [0.046]**	0.132 [0.044]***	0.098 [0.048]**	0.190 [0.103]*
Get Help from Instructors	-0.065 [0.070]	-0.007 [0.049]	0.005 [0.046]	-0.005 [0.044]	0.020 [0.048]	-0.183 [0.109]*
Created New Routine	0.071 [0.064]	0.007 [0.057]	-0.015 [0.047]	0.011 [0.047]	-0.011 [0.049]	0.241 [0.123]*
Try New Activities	-0.068 [0.066]	0.051 [0.052]	0.053 [0.049]	0.017 [0.048]	0.051 [0.052]	-0.068 [0.104]
Make Effort to Learn from Setbacks	0.029 [0.067]	0.043 [0.052]	0.015 [0.049]	0.025 [0.047]	0.014 [0.051]	0.059 [0.110]
Help Others	0.014 [0.075]	0.016 [0.052]	-0.013 [0.049]	0.006 [0.047]	-0.016 [0.051]	0.096 [0.126]
Baseline Survey Problems Index	-0.338 [0.062]***	-0.441 [0.047]***	-0.407 [0.044]***	-0.416 [0.042]***	-0.422 [0.046]***	-0.449 [0.095]***
Treatment Problems Index	-0.351 [0.165]**	-0.166 [0.109]	-0.291 [0.107]***	-0.220 [0.102]**	-0.264 [0.112]**	-0.249 [0.234]
Observations	216	353	406	435	371	99
Dep Var. Mean	0	0	0	0	0.01	-0.039
Dep Var. SD	[0.548]	[0.537]	[0.549]	[0.555]	[0.557]	[0.511]

Notes: Each column reports the estimated coefficients from regressions of the outcome index from the follow-up survey on the coping strategies treated students listed as resonating with them in a subsample that excludes students attending the campus(es) listed in the column title. Students in the sample in column 5 took the follow-up survey in June; students in the sample in column 6 took the follow-up survey in August. All regressions control for the the baseline survey problems index and the post-treatment problems index and additionally account for the following control variables: an indicator for first-generation student; age; an indicator for being male; an indicator for being a Canadian citizen; mean prior grade; campus fixed effects; an indicator for taking a maximum effort approach to university studies; a measure of baseline locus of control; expected grade average at the start of the 2020 summer semester, and student race indicators. Robust standard errors are reported in brackets below coefficient estimates. *** indicates statistical significance at the 1 percent level; ** indicates statistical significance at the 5 percent level; * indicates statistical significance at the 10 percent level.

Table B1: Sample Quotes for Problems - Study 1

(1) Problem	(2) Sample Quote 1	(3) Sample Quote 2	(4) Sample Quote 3
Depression or Anxiety	Being at home and not being able to go outside is giving me anxiety and I have never had a problem with anxiety before but this situation is really taking a toll on my mental health.	Academically, half of my final exams got cancelled so the pressure and motivation of school seems like it has dissipated. This is especially weird as I now have a lot more idle time, more so than I think I have ever had at any point in my life. This has been accompanied by a feeling that oscillates between nagging anxiety and manic/productive energy that I should utilize this opportunity for personal growth.	It has affected my social wellbeing. Due to the fact that I am inside the house everyday, with very little human interaction, I feel that it has caused me to talk a lot more with myself than I usually do. It has also given me more anxiety when completing online school work because not only do I have this pandemic and my family's wellbeing to worry about, but now I have to worry about completing school work as well. And that anxiety causes me to not do as well on my school work than I usually do.
Loneliness	In order to feel connected, I usually video call with my friends and parents almost every day. This gives me a chance to meet with others and talk to each other. There are also others measures such as exercising or reading that helped me to cope with the loneliness that I feel during this time.	Firstly, the social isolation has been quite hard. I have found myself to have grown quite sociable and extraverted throughout my first year at university and have found an amazing group of friends. Now, due to timezone differences and the abrupt nature of the end of first year, it has been quite sad to not be able to see people and socialize in person. This is exacerbated by the fact that I am truly a big believer in face to face interaction and although technology really helps in bridging the distance, there is always a glass barrier.	From the experience, I have really developed my communication skills in the way that I have really exploited my social media accounts to feel less lonely.
Lethargy or Lack of Motivation	One of the biggest challenges for me is adapting to the new online learning environment. I think this new environment has caused me to lose motivation and I have struggled to finish tasks on time. My sleep schedule has been negatively affected because I am in bed for most of the day. I only ever go outside when I have work, or if I need to buy something.	It is difficult to be away from all of my friends at school, and it makes it much more difficult to attend my classes and stay motivated because I need to take all my classes online. The weather is really nice now, so it is really hard not being able to go out and hang out with my friends.	Studying from home has become a big challenge, I live with 5 other people and all at home its very hard to concentrate and find quiet space. My biggest concern is my lack of motivation to get work done and to study properly. It's hard to have had plans months in advance, that are now all cancelled due to health measures and precautions. I'm thankful not to have to worry financially, because I live with my family, but I do miss my job and going out. I don't feel very useful.
Adjustment to Online Learning Difficult	It's difficult to focus because my neighbors have been doing construction so I've been having to right my exams through loud drilling noises.	My daily life has been affected greatly. I recently had to leave the country to go back to my family. Due to the time difference, it is quite difficult to attend online lectures. The exams next week will also take place a lot later for me due to the time difference, making me stay up later than I am used to. I've become separated from from the friends I made at university, but we still keep on contact regularly through social media. Overall, staying indoors all the time also feels mentally draining.	Every professor in every course handled this transition very differently, and thus made different changes to the course work. Trying to stay on top of all this in all the chaos has been difficult. The professors have been trying to overcompensate for the prospect of academic dishonesty by raising the difficulty of exams considerably. In terms of term work, professors do not seem to be very considerate of the fact that we are not only going through the physical challenge of moving and finances, but also mental issues. It is challenging for everyone to cope right now as these are uncertain times for everyone.
Struggling to Establish New Routine	Currently I am facing the challenge of struggling with being socially distanced from many other people. It can be hard on me that I am not able to see my friends and interact with other people. This can make me sometimes feel down. I also struggle with doing school from home - maintaining a routine, having structure etc. and also struggling with technology/wifi.	It has effected me mentally as there is no social life and doing the same routine as every other day	I am finding it difficult to stay on task with schoolwork and manage my time. I have much more free time than I am used to and it is hard to decide when to do work. When I do work, I find it hard to not get distracted.

Notes : This table presents three quotes from students in Study 1 illustrating each of the problems listed in column 1.

Table B2: Sample Quotes for Coping Strategies - Study 1

(1) Coping Strategy	(2) Sample Quote 1	(3) Sample Quote 2	(4) Sample Quote 3
Created New Routine	I've began my meditating routine which I had not taken seriously before. It is helping and doing wonders to combat my daily anxieties. I have also begun reading books, watching / following through online courses that I did not have the time to do before (or procrastinated to do so).	Initially, I went biking a lot at a bike trail near my house but since concerns have grown I stopped doing that. However, going for walks with my dog help me get fresh air and some activity. Since not being on campus, I do feel that I am living a far more sedentary lifestyle and it is problematic for me personally. Another thing I have done is work remotely for clubs and non-profits that I was active in during the school year. For example, I helped make a quarantine-reading list for the [Organization Removed for Privacy] and those readings keep me busy. In moving forward, I want to find more ways to be active from home and would like to call my friends more often.	To take care of my mental health, I would ask my father to drive me around and soon will ask him if he can teach me how to drive since we have so much time. I also sit in my balcony with my computer so I can feel like I am outside. I also open the windows all the way so as much sunlight as possible can get in. I find when I wake up to the sunlight I am in a better mood then if I keep the blinds shut. I also have starting watching unboxing videos since I am not able to inbox my own packages. (there goes retail therapy :/) A lot of these unboxing videos have an ASMRish kind of vibe and are kind of calming to watch. I also spend time with my siblings so that helps.
Social or Group Activity	Now that i can't go to the gym so i thought why not bring the gym to myself, that way i dont have an excuse to not workout and im eating much healthier because we can't go out to eat :) as for my mental health, my friends and text and speak on the phone everyday and sometimes facetime.	I learned to appreciate going outside and hanging out with my friends, and I will likely bail out on plans less after this is all over. Even though we can't see each other in person, I feel that my friends are getting closer because we talk online almost every day, which wasn't the case before.	I spend more time with my family which makes isolation much more easier. I used to be on campus all day and barely get to see my family but now that I am at home all day its nice to spend some time with them, watch tv/movies together, go bike riding, etc..
Physcial Exercise	I have weights and an elliptical at home so I work out here and there as well as eating proper foods to maintain physical health. Mental health has been a challenge since applying for CS POST is very stressful and given the situation its hard to tell whether or not I'll actually be able to make it. As mentioned previously though, talking to friends over a voice call is great and helps with the social distancing. I don't really have any additional strategies planned going forward.	The most difficult change is having to adjust my studying style and technique. Additionally I get distracted easily so online classes become more challenging. The most positive change is I take daily walks and have started doing home exercises	I used to go to school, go to the gym and meet friends on campus but now I have to stay home all the daytime. The most difficult one is my exercise routine, because it's hard to do some exercise at home. [...] I changed those exercise which can be done on the yoga mat.

Notes: This table presents three quotes from students in Study 1 illustrating each of the coping strategies listed in column 1.

Table B3: Variables in Overall Well-Being Outcome Index - Study 2

Category	Component Variables of Outcome Index	Scale for Component Variables
Satisfaction	All things considered, how satisfied are you with your life as a whole these days?	1 to 7 Scale
	All things considered, how satisfied are you with your experience at University of Toronto this term?	
	How satisfied are you with [your] academic performance?	
Feeling In Control	In the last 4 weeks, how often have you felt that you were unable to control the important things in your life?	1 to 5 Scale
	In the last 4 weeks, how often have you been upset because of things that were outside of your control?	
Life Under Pandemic	The COVID-19 pandemic has, so far, made my life challenging	1 to 7 Scale
	My situation during the COVID-19 pandemic is better than most other students at UofT	
	During the COVID-19 pandemic I am able to feel socially connected to friends and family	
	During the COVID-19 pandemic I still feel part of the University of Toronto community	1 to 6 Scale
	My situation trying to adapt during COVID-19 has, so far, been challenging	1 to 5 Scale
Stress	In the last 4 weeks, how do you feel your situation under COVID-19 has changed?	1 to 7 Scale
	How much stress would you say you have been experiencing in the last 4 weeks?	
	How confident do you feel that you are able to cope with your stress on a day-to-day basis?	
	Over the last 4 weeks, how often have you been bothered by Feeling nervous, anxious, or on edge?	
	Over the last 4 weeks, how often have you been bothered by Not being able to stop or control worrying?	
Belonging	Over the last 4 weeks, how often have you been bothered by Little interest or pleasure in doing things?	1 to 4 Scale
	Over the last 4 weeks, how often have you been bothered by Feeling down, depressed, or hopeless?	
	I feel like I belong here at U of T	
	UofT wants me to be successful here	
	I know where to go if I need academic advice right now	
Social Connections	I know where to go if I need personal advice right now	1 to 6 Scale
	UofT does its best to help support me	
	In the last 4 weeks, how often do you feel disconnected from others?	
Health	In the last 4 weeks how often do you feel that you lack companionship?	1 to 4 Scale
	In the last 4 weeks, would you say your physical health is:	
	In the last 4 weeks, would you say your mental health is:	1 to 5 Scale